WHAT IS CLAIMED IS:

1. A method to detect one or more nucleic acids of interest, comprising subjecting a sample comprising said nucleic acid(s) to nuclease protection with one or more protection fragments, and detecting the hybridized duplex molecules, or the single strand protected nucleic acid(s), or the protection fragment(s), with mass spectrometry.

2. The method of claim 1, wherein the method is a high throughput method.

3. The method of claim 2, wherein the nucleic acid(s) which is detected is a protection fragment(s).

4. The method of claim 3, wherein at least two different protection fragments are detected.

5. The method of claim 3, wherein at least 16 different protection fragments are detected.

6. The method of claim 2, wherein the nucleic acid(s) which is detected is a hybridized duplex molecule.

7. The method of claim 2, wherein the nucleic acid(s) which is detected is the protected nucleic acid.

8. The method of claim 2, wherein said nucleic acid(s) of interest is measured.

9. The method of claim 8, wherein the nucleic acid(s) which is measured is a protection fragment(s).

10. The method of claim 2, wherein said protection fragment is modified chemically, and said chemical modification, with or without the nucleic acid portion of the protection fragment, is detected.

11. A combination useful for the detection of one or more target(s) in a sample, which comprises, before the addition of said sample,

a) a surface, comprising multiple spatially discrete regions, at least two of which are substantially identical, each region comprising

b) at least eight different oligonucleotide anchors, each in association with

c) a bifunctional linker which has a first portion that is specific for the

oligonucleotide anchor, and a second portion that comprises a probe which is specific for said target(s),

wherein said surface has

a) about 96 substantially identical regions, wherein each region comprises about 16, 36, 46 or 100 different oligonucleotide anchors,

b) about 384 substantially identical regions, wherein each region comprises about 9, 16, or 25 different oligonucleotide anchors, or

c) about 1536 substantially identical regions, wherein each region comprises about 4 or 9 different oligonucleotide anchors.

12. A method of detecting at least one target, comprising

a) contacting a sample which may comprise said target(s) with the combination of claim 11, under conditions effective for said target to bind to said combination,

b) contacting said combination and any bound targets with a labeled detection probe, and

c) detecting said detection probe.

13. The method of claim 12, wherein said labeled detection probe produces a chemiluminescent signal.

14. The method of claim 12, wherein the target is measured.

15. A method of detecting at least one target, comprising

a) contacting a sample which may comprise said target(s) with a bifunctional linker which has a first portion that is specific for an oligonucleotide anchor and a second portion that comprises a probe which is specific for said target(s), under conditions effective to obtain a first hybridization product between said target(s) and said linker,

b) contacting said first hybridization product with a combination under conditions effective to obtain a second hybridization product between said first hybridization product and said combination, wherein said combination comprises, before the addition of said first hybridization product,

1) a surface comprising multiple spatially discrete regions, at least two of which are substantially identical, each region comprising

2) at least 8 different oligonucleotide anchors,

c) contacting said first hybridization product or said second hybridization product with a labeled detector probe, and

d) detecting said detection probe.